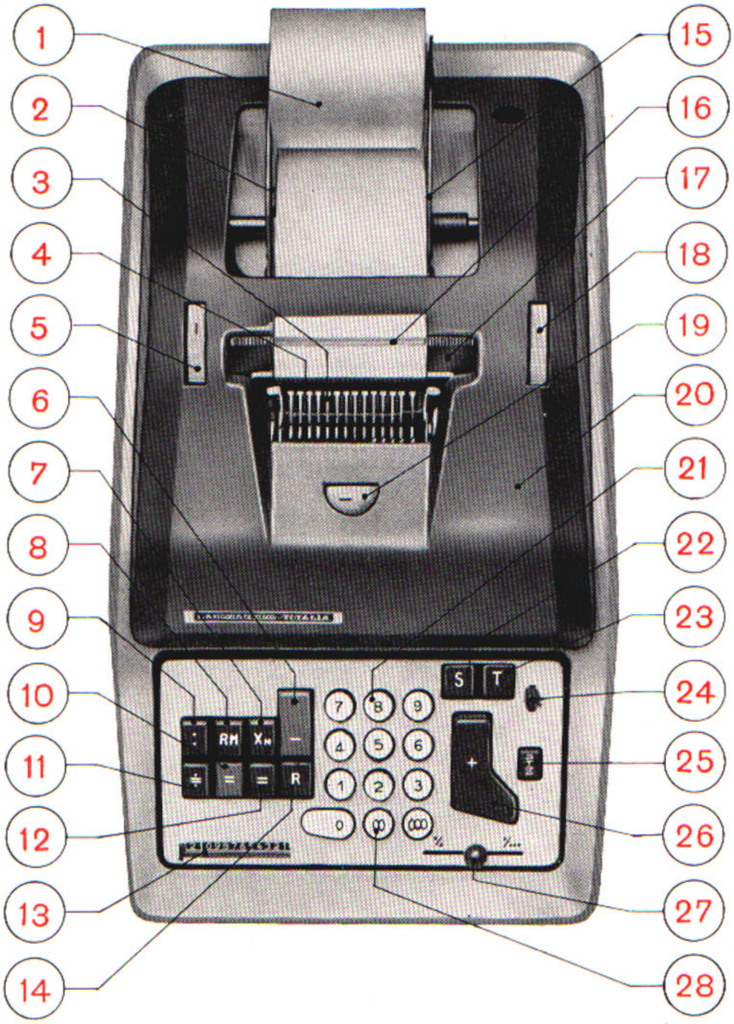
LAGOMARSINO-TOTALIA

division
8381

LAGOMARSINO



1 Paper roll
2 Left paper-holder
3 Printing type bars
4 Two-colour ribbon
5 Paper release lever
6 Subtraction key
7 Multiplicand and non-add entering key
8 Recall memory key
9 Dividend entry key
10 Negative multiplier key
11 Divisor control key
12 Positive multiplier key
13 Entry pointer
14 Repeat key
15 Right paper-holder
16 Paper cutter
17 Rubber roller
18 Platen roller
19 Knurled disc of the point-setting device
20 Upper cover
21 Number keys
22 Sub-Total key
23 Total key
24 Automatic total pre-setting control
25 Entry cancellation and multiplication stop key
26 Addition bar
27 Percentage lever
28 « 0 » « 00 » « 000 » keys

The first necessity of any office: to document, to calculate quickly and to have the terms of the calculation printed on the machine.

Just one glance and the checking is made with the greatest certainty.

These and many other advantages are offered by Lagomarsino's office machines: the quality, the perfect and sturdy construction and, above all, a continuous modernization thanks to an experience dating back to 1896.

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N.B. - When beginning to read these instructions, please open the inside page of the cover.

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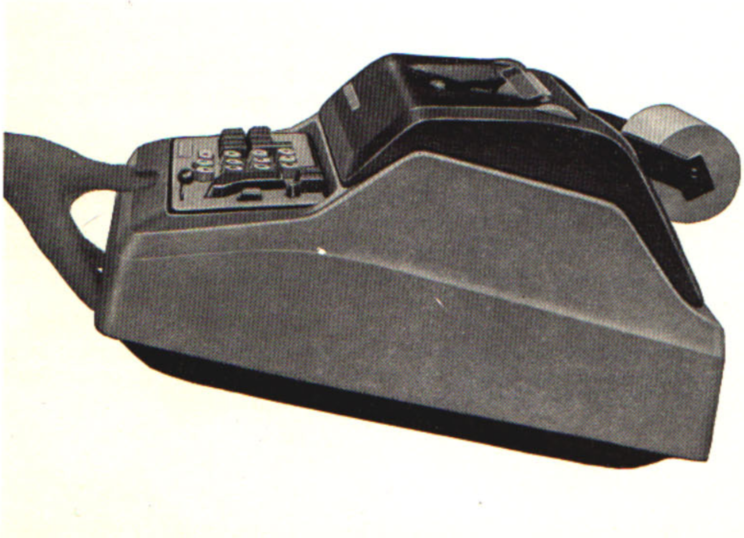
introductory notes

We are very pleased you have joined the great number of users of LAGOMARSINO machines, well known for the high precision of their mechanism, the ease of operation and their excellent performances.

If you follow with care the instructions given in the next pages you will acquire in a very short time a thorough knowledge of the machine.

The **LAGOMARSINO DIVISION** is a printing calculator with fully automatic multiplication and division and with the automatic re-entry of the results of addition, subtraction, multiplication and division.

When you have to use the machine, draw it near you by lifting its front part: the machine will smoothly glide on a rubber roller fitted at the back of the base.



general rules

1 Before starting to use the machine, make sure that the characteristics of the feeding current for which it has been pre-set, correspond to the ones of the electric current available where the machine is to be used.

The machine is supplied with a universal type motor, whose operation may be pre-set having in view the characteristics of the available electric current, by properly fitting in the multivoltage plug placed in the machine basement plate, and shown in the illustration.

It is easy to check whether the available electric current is suitable for the machine: the type and voltage of the required current may be read on the multivoltage plug by looking through the transparent protecting cap.

If the characteristics of the available current do not correspond with those which have been pre-set for the machine, it is necessary to perform the following operation.

Disconnect the machine, by means of a screwdriver remove the protecting cap, then lift the plug from its socket and turn it until the required voltage will appear in the proper window.

Make sure that the current type (d.c., or a.c.) is correct. Such change, if required, may be effected by lifting the disc existing between the socket and the plug, fitting it in again upside down.

Then fit in the plug and screw the protecting cap on the basement plate again.

Connect the machine with the plug by means of the flexible cable which has been supplied by us.

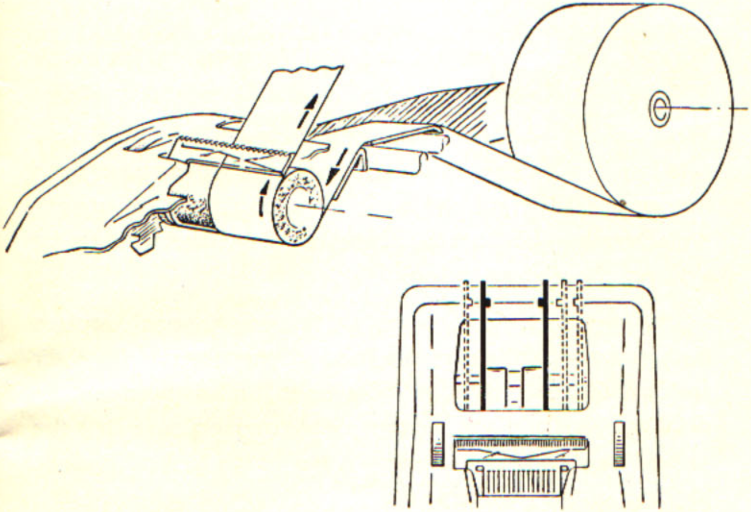
At the end of the day's work do not forget to disconnect the plug from the wall-socket (and not the cable from the machine).

2 Before beginning any operation, maxe sure that the machine is cleared. To do this depress the « Total » key: the symbol « T » will be printed on the papertape, either alone or with a number before it, which means that the machine is cleared.

3 If you enter a wrong number and you become aware of it before depressing the operative key, you may cancel the wrong number by depressing the Entry cancellation key (stop).

If, instead, the wrong number has already been inserted in the calculation, the correction may be affected by entering the same number with a contrary (positive or negative) value.

4 Just as it is required by all precision instruments, your machine must be guarded against moisture and dust. When not in use do not forget, therefore, to protect it with its cover. For the inside cleaning and mechanical inspection, always apply to specialized mechanics.



how to insert the paper roll

The paper roll must be placed between the two guides situated on the top, towards the back part of the machine. The left guide may be moved a little, thus allowing the paper roll to be inserted, upon which the guide is automatically shifted back again for supporting the roll. The two guides are provided with pivots, which must be introduced in the central hole of the paper roll.

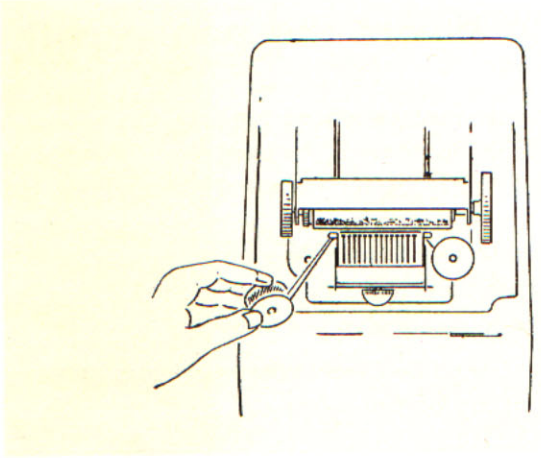
The paper roll must be fitted in the machine so that it may unwind from the bottom to the top.

Insert the paper tape in the back part of the carriage, in contact with the rubber roller, and turn the knurled knob placed at the right of the roller.

The paper tape which will appear in the front part of the carriage must be inserted under the transparent bar.

Now make sure that the paper tape has been inserted perfectly parallel with the roll; if it is not so, it is necessary to make the proper adjustment by operating the paper releasing lever placed at the left side of the carriage.

The roll supporting device of your machine will enable you to employ paper tapes of various widths up to a maximum of 89 mm, as the right guide may be set in three different positions.



how to change the ribbon

Remove the upper cover by slightly pressing the front, and pulling it upwards.

Wind up the ribbon on one of the two spools by simply rotating it with two fingers. Loosen the ribbon end from the empty one, and remove both spools from the machine after you have taken them out from their pivots by shifting the fixing spring.

Fit the end of a new ribbon on the empty spool, replace both spools in their pivots, and clamp them with their springs. Fit the ribbon in the proper guides, between the printing bars and the rubber roller, making sure that the ribbon may properly unwind in the inside of both spools, looking at the machine.

Now the operation is ended, and it is possible to put back in its place the upper cover by inserting the two guiding hooks—placed behind—in the proper recesses, and fixing it by means of a slight pressure.

keyboard

The keyboard of **LAGOMARSINO DIVISION** machines has been planned so as to allow the operator to completely master the machine and reach the highest working speed.
Please refer to the plan of the machine as shown on the inside page of the cover.

- The keys marked with the digits from 1 to 9 are placed in the central part of the keyboard and, immediately below, the keys with one, two, and three « 0 ».

These keys are needed for entering the numbers to be used in the calculation. The entering of the said numbers must be made figure by figure, just as you read them. The « 0 » keys cannot be depressed if another significative figure has not been entered before.

- On the right hand-side of the keyboard there are the following operative keys:

Total key (23): to be used at the end of each operation in order to know its result.

Sub-total key (22): it has the same effect of the Total key but is to be used when the total must be carried over.

Addition key (26): it is used for including positive numbers in the calculation.

Total (T) automatic pre-setting control (24). *

Entry cancellation and Multiplication stop key (25): it is used for cancelling wrong figures entered in the machine. Moreover it may be used for stopping the calculation during multiplications, in case of excess capacity.

Device for percentage calculations (27). *

- On the left hand-side of the keyboard there are the following operative keys:

Subtraction key (6): it is used for giving a negative value to the figures entered in the machine, when they must be deducted in the calculation.

Repeat key (14): this key is used when it is necessary to repeat the number entered in the machine. If it is used together with the Subtraction key, the repetition will have a negative value.

« Non-add » key (7): it allows the printing on the tape of reference numbers, before and/or during any operation. Therefore the figures entered by the use of this key are not included in the calculation.

Key for entering the multiplicand (7): to be used for inserting the figures which have been entered as multiplicand in the operations of positive or negative multiplication.

Key for entering the multiplier (10-12): it should be noted that there are two such keys, one black and one red.
Both are used for entering the multiplier in multiplication operations. The black key is used in positive calculations, while the red one must be used in negative calculations.

« Recall memory » key (8). *

Entry of dividend (9): it is used to insert a figure entered as a dividend, when dividing.

Entry of divisor (11): it controls the entry of the divisor and the automatic calculation of the division.

- In the keyboard there is also the following:

Entry pointer (13): it gives the possibility to know at any moment the number of digits entered; this number is shown by the position of the pointer, which is automatically shifted every time a digit key is being depressed.

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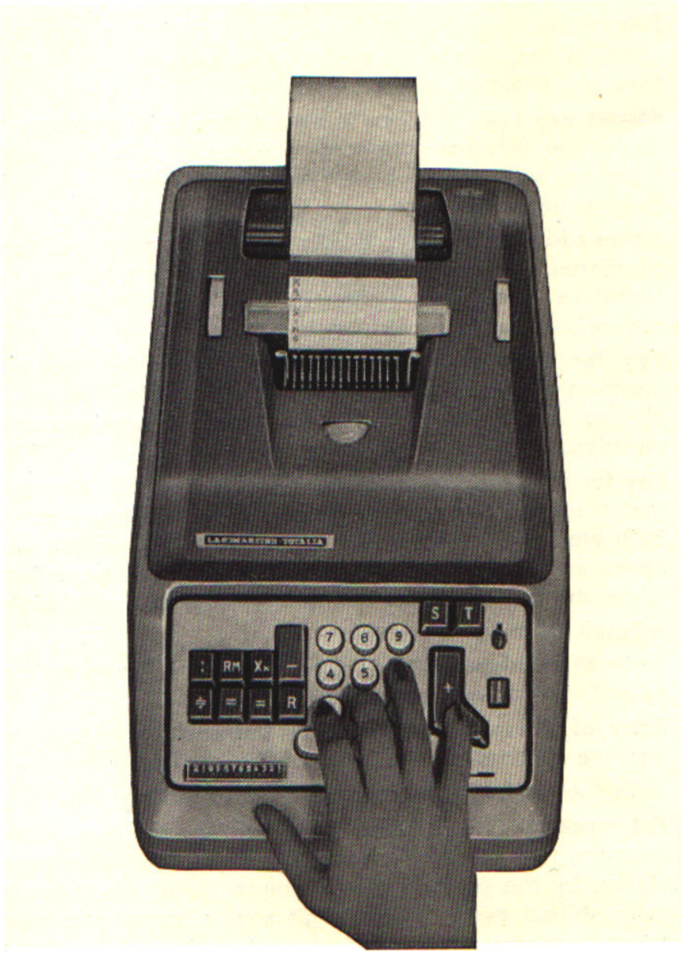
* For the explanation of these controls, please refer to the paragraph: « SPECIAL CONTROLS ».



how to use the keyboard

The reduced keyboard, i.e. the keyboard formed by nine numeral keys only, plus the 0-keys, offers considerable advantages, in particular being able to achieve a fast working speed with a minimum effort.

To do this, it is necessary to completely master the keyboard, so as to be able to enter the figures without looking at the keys.

You can achieve this, after a short period of training, by accustoming yourself to use the machine according to the following rules:

- Depress number-keys with a quick and light touch, while operative keys should be operated by exerting more pressure.
- Accustom your hand to take the right position on the keyboard by recognizing the numeral keys 4, 5, 6, which are provided to this purpose with a concave top surface.
- Always use:

  the index for entering numbers 1, 4, 7, 0
  the middle finger for entering numbers 2, 5, 8, 00
  the ring finger for entering numbers 3, 6, 9, 000.
- Use the index for depressing the operative keys placed at the left, i.e.: Subtraction key, Repeat key, key for entering the multiplicand, key for entering the multiplier, « Recall memory » key, dividend entry key and divisor control key.
- Use the ring finger (or the little finger) for depressing the operative keys placed at the right, i.e.: Total, Sub-total, Entry cancellation, and Addition keys.

A quick, very light, and rhythmical touch will become very soon natural to any operator. This is the best system for achieving the highest performance while making exact calculations without undue strain.

special controls

The **LAGOMARSINO DIVISION** is equipped with controls to improve its performance and make the operator's task easier. These controls are as follows:

Total (T) automatic pre-setting control (24): this lever may be pre-set in one of the following positions—marked on the keyboard—according to requirements:

- • = no result will be printed on the paper tape. Such result may thus be employed by the operator according to needs, as required by the development of the calculation;
- T = the machine will automatically print the result of the multiplication.

Percentage lever (27): only LAGOMARSINO printing calculators are equipped with this device which gives the possibility of making all percentage calculations, automatically printing the result in the correct columns with the correct decimal place.

This lever has two positions:

- — the lever should be moved to the left (%) when the percentages to be calculated are in whole numbers;
- — it should be moved to the right (‰) when the percentages to be calculated include fractions or decimals e.g. 2,50 %, 3,75 %.

This percentage lever can also be used to increase the capacity of the machine in a serie of multiplications, by eliminating the last two (%) or four (‰) figures of the multiplicand.

« Recall memory » control (8): this control recalls the last total even if another calculation has begun.

Therefore it avoids the work and waste of time which would be required for re-entering a total in the machine, when this total must be employed later on for further calculations.

Decimal Point Disc (19): this knurled disc, placed on the front of the machine cover, allows the operator to establish in advance the decimals place.

The possibility of predetermining the position of the decimal in calculation represent a considerable advantage, thus making the work easier whilst allowing the operator to read clearly the results obtained.

The use of this device is extremely simple: the number of decimal places in the answer corresponds to the number of dots shown on the knurled disc.

Therefore merely turn this disc to alter the position of the decimal point.

Whatever the predetermined position for the decimals may be, the whole number printed by the machine is always subdivided in groups of three figures, in order to make its reading easier.

When only an arrow is seen on the knurled disc, this means that no decimal point will be printed.

the operations - *general rules*

In the following pages you will find the necessary instructions for performing the various operations.

Each page is divided in three parts:

- on the left you will find explanation of the operation;
- in the centre is shown the paper tape produced during the operation;
- on the right are listed the movements to be performed for effecting the operation.

In the **LAGOMARSINO DIVISION** machine all figures referring to positive values are printed in black on the paper tape, while the figures regarding negative values are printed in red. Therefore a red total (or sub-total) will point out a credit balance. There is the exception of the quotient, which is printed in black when the operation gives a remainder, and in red in the opposite case.

At the end of each operation the machine will automatically effect a supplementary stroke; the blank space thus obtained has the purpose of making calculations easier to read and to check.

addition

Make sure that the machine has been cleared.

Enter each amount on the keyobard, and depress the Addition key (+).

After having entered all the numbers to be added, depress Total (or Sub-total) key.

subtraction

Subtraction

Make sure that the machine has been cleared.

Enter the first number, and depress Addition key (+). Afterwards enter the number to be deducted, and depress Subtraction key (—).

Then depress Total key.

Credit Balance

When in an operation the total of negative values exceeds the total of positive ones, we obtain a negative balance (« Credit Balance »).

T	*Symbol showing that the machine is cleared*
12.25 +	*Enter the number, depress (+) key*
15.00 +	*Enter the number, depress (+) key*
134.50 +	*Enter the number, depress (+) key*
18.75 +	*Enter the number, depress (+) key*
180.50 T	*Depress Total key*

T	*Machine cleared*
125.75 +	*Enter the number, depress (+) key*
15.40 —	*Enter the number, depress (—) key*
110.35 T	*Depress Total key*

T	*Machine cleared*
45.50 +	*Enter the number, depress (+) key*
139.25 —	*Enter the number, depress (—) key*
93.75 T	*Depress Total key*

repetition

Repeat addition may be obtained by means of the Repeat key (R) which must be kept depressed until the repetition is over.

For Repeat subtraction, depress the (R) and (—) keys together.

If, after the repeated numbers, there are other figures to be added or deducted, it is necessary to first cancel the number entered in the machine by depressing the "Entry cancellation" key.

The number entered in the machine is automatically cancelled by depression of the Total key.

	T	*Machine cleared*
3.4 6 9.8 5	+	*Enter the number, depress (+) key*
2 5 3.6 5	+	*Enter the number, depress (R) key*
2 5 3.6 5	+	*(R) key depressed*
2 5 3.6 5	+	*(R) key depressed*
4.2 3 0.8 0	T	*Depress Total key*

	T	*Machine cleared*
3 2 7.8 5	+	*Enter the number, depress (+) key*
1 5.0 0	+	*Enter the number, depress (R) key*
1 5.0 0	+	*(R) key depressed*
1 5.0 0	+	*(R) key depressed*
1 7.2 0	+	*Depress (stop) key, enter the number, depress (+) key*
3 9 0.0 5	T	*Depress Total key*

multiplication

The multiplication is performed automatically after having entered the two factors and depressed the relevant operative keys.

The operation results printed on the paper tape in the most rational way too, as only the multiplicand, the multiplier and the result appear on it.

It is to be noted that the operating speed in the multiplication of numbers bigger than 5 is automatically increased as the machine makes the calculation by employing complements, i.e. the machine has automatic short-cut multiplication.

T	*Machine cleared*
18.00 XN	*Enter the number, depress (Xn) key*
35 =	*Enter the number, depress (=) key*
630.00 T	*Automatic Total*

T	*Machine cleared*
18.00 XN	*Enter the number, depress (Xn) key*
35 =	*Enter the number, depress (=) red key*
630.00 T	*Automatic Total*

automatic correction of the multiplicand

If a wrong multiplicand has been included in the calculation by depressing its operative key, it may be corrected by simply entering in the machine the correct multiplicand which automatically cancels the former one.

T	*Machine cleared*
45 XN	*Wrong multiplicand*
12 XN	*Enter the right multiplicand, depress (Xn) key*
2 =	*Enter the multiplier, depress (=) key*
24 T	*Automatic Total*

division

Also this operation is performed automatically, with only the entry of the dividend and the divisor, and the depression of the corresponding control keys.

It has to be noted that in the Lagomarsino Division printing calculators each operation is represented by the corresponding control keys; this make their use an extremely simple one, even on the part of untrained operators, or users not well-acquainted with the machines.

The printing of the operation takes place with the indication of the dividend, divisor, quotient, and remainder, if any.

T	*Machine cleared*
1 4 4 :	*Enter the number, depress (:) key*
1 2 =	*Enter the number, depress (÷) key*
1 2 Q	*Automatic Total*
T	

T	*Machine cleared*
1 4 5 :	*Enter the number, depress (:) key*
1 2 =	*Enter the number, depress (÷) key*
1 2 Q	*Automatic Total*
1 T	*Remainder*

quotient with decimal figures

When the division has a remainder and one wishes to obtain a result with decimals, it is necessary to add to the dividend as many zeros as the decimals required.

Example: 145 : 12 = 12.08

T	*Machine cleared*
145.00 :	*Enter the number, depress (:) key*
12 =	*Enter the number, depress (÷) key*
12.08 Q	*Automatic Total*
4 T	*Remainder*

whole number dividend, and divisor with decimals

If a whole number (dividend) with decimals (divisor) it is has to be divided by one necessary to add to the dividend as many zeros as the decimals of the divisor.

Example: 332 : 0.15 = 2213

T	*Machine cleared*
33200 :	*Enter the number, depress (:) key*
15 =	*Enter the number, depress (÷) key*
2213 Q	*Automatic Total*
5 T	*Remainder*

divisor greater than dividend

If the divisor is greater than the dividend, the result obtained will obviously be less than « one ».
For this operation it is therefore necessary to add as many zeros to the dividend until this is greater than the divisor.

Example: 124 : 288 = 0.43

T	*Machine cleared*
124.00 :	*Enter the number, depress (:) key*
288 =	*Enter the number, depress (÷) key*
43 Q	*Automatic Total*
16 T	*Remainder*

position of the decimal point

To determine the decimals in the quotient, it is necessary to remember that this is calculated by the difference between the decimals in the dividend and those in the divisor.

One has therefore to take care to pre-set the point setting device accordingly.

Example:

1728.50 : 12 = 144.04

T	*Machine cleared*
1.728.50 :	*Enter the number, depress (:) key*
12 =	*Enter the number, depress (÷) key*
144.04 Q	*Automatic Total*
2 T	*Remainder*

Example:

1728.55 : 12.4 = 139.3

T	*Machine cleared*
1.728.55 :	*Enter the number, depress (:) key*
12.4 =	*Enter the number, depress (÷) key*
139.3 Q	*Automatic Total*
12.3 T	*Remainder*

Example:

1728.85 : 12.25 = 141

T	*Machine cleared*
1.728.85 :	*Enter the number, depress (:) key*
12.25 =	*Enter the number, depress (÷) key*
141 Q	*Automatic Total*
160 T	*Remainder*

use of the special controls

accumulation of addition totals

It is possible to obtain the accumulation of the totals of several additions, without being obliged to re-enter them in the machine, by employing the « Recall memory » device (RM).

It is to be noted that this result is obtained by determining all partial totals of the various sums.

T	*Machine cleared*
12.25 +	*Enter the number, depress (+) key*
15.50 +	*Enter the number, depress (+) key*
7.45 +	*Enter the number, depress (+) key*
35.20 T	*Depress Total key*
12.15 +	*Enter the number, depress (+) key*
11.48 +	*Enter the number, depress (+) key*
23.63 S	*Depress Sub-total key*
35.20 RM	*Depress (RM) key*
58.83 T	*Depress Total key*
6.75 +	*Enter the number, depress (+) key*
9.20 +	*Enter the number, depress (+) key*
15.95 S	*Depress Sub-total key*
58.83 RM	*Depress (RM) key*
74.78 T	*Depress Total key*

difference between addition totals

By following the same method of the previous calculation, performing however the second addition in the negative, it will be possible to obtain the difference between the totals of two additions.

This is particularly interesting when making Debit-Credit-Balance accounting operations.

	T	*Machine cleared*
12.25	+	*Enter the number, depress (+) key*
7.58	+	*Enter the number, depress (+) key*
15.80	+	*Enter the number, depress (+) key*
35.63	T	*Depress Total key*
9.05	–	*Enter the number, depress (—) key*
13.80	–	*Enter the number, depress (—) key*
4.18	–	*Enter the number, depress (—) key*
27.03	S	*Depress Sub-total key*
35.63	RM	*Depress (RM) key*
8.60	T	*Depress Total key*

accumulation of products

By using the Automatic total pre-setting lever (24) shifted towards the top, it is possible to obtain the accumulation of the totals of several multiplications made one after the other.

The most interesting use of this operation is when checking invoices.

However it is also employed in any calculation, formed by a number of multiplications, where it is not important to know each single total, i.e. it is sufficient to know the sum of the totals.

	T	*Machine cleared*
		Shift lever (24) upwards
12.00	XN	*Enter the number, depress (Xn) key*
1.47	=	*Enter the number, depress (=) key*
18.95	XN	*Enter the number, depress (Xn) key*
7.26	=	*Enter the number, depress (=) key*
3.75	XN	*Enter the number, depress (Xn) key*
19.30	=	*Enter the number, depress (=) key*
227.5920	T	*Depress Total key*

difference between products

When accumulating products, it is possible to include in the calculation one, or more, negative multiplications, thus obtaining the difference between their products (automatic total pre-setting lever shifted towards the top).

Difference between two products

It is possible to know the positive total of the first multiplication, while the second total represents the difference between the two products.

T	*Machine cleared*
	Shift lever (24) upwards
12.00 Xn	*Enter the number, depress (Xn) key*
12 =	*Enter the number, depress (=) key*
144.00 S	*Depress Sub-total key*
1.20 Xn	*Enter the number, depress (Xn) key*
11 =	*Enter the number, (=) red key*
130.80 T	*Depress Total key*

Difference among several products

Calculation of gross amounts with the subtraction of partial amounts and net result.

T	*Machine cleared*
	Shift lever (24) upwards
7.50 Xn	*Enter the number, depress (Xn) key*
12 =	*Enter the number, depress (=) key*
2.20 Xn	*Enter the number, depress (Xn) key*
3 =	*Enter the number, (=) red key*
1.80 Xn	*Enter the number, depress (Xn) key*
2 =	*Enter the number, (=) red key*
79.80 T	*Depress Total key*

automatic re-entry

The printing calculator **LAGOMARSINO DIVISION** is provided with automatic re-entry; the result of additions, substractions, multiplications and divisions can act therefore as a multiplicand.

automatic re-entry of a total of additions

T	*Machine cleared*
12.25 +	*Enter the number, (+) key*
18.75 +	*Enter the number, (+) key*
9.15 +	*Enter the number, (+) key*
40.15 T	*Total key*
2.75 =	*Enter the number, (=) key*
110.4125 T	*Automatic Total*

automatic re-entry of a total of subtractions

T	*Machine cleared*
85.10 +	*Enter the number, (+) key*
14.70 −	*Enter the number, (—) key*
22.60 −	*Enter the number, (—) key*
47.80 T	*Total key*
24 =	*Enter the number, (=) key*
1.147.20 T	*Automatic Total*

automatic re-entry of a total of multiplications

T	*Machine cleared*
12.18 X_N	*Enter the number, (Xn) key*
7.55 =	*Enter the number, (=) key*
91.9590 T	*Automatic Total*
25 =	*Enter the number, (=) key*
2.298.9750 T	*Automatic Total*

automatic re-entry of a quotient

T	*Machine cleared*
1728 :	*Enter the number, (:) key*
144 =	*Enter the number, (÷) key*
12 Q	*Automatic Total*
T	
144 =	*Enter the number, (=) key*
1728 T	*Automatic Total*

cubing, etc.

The automatic re-entry of the total gives the possibility of performing calculations one after the other, which is particularly useful when it is necessary to calculate surface and volume figures, and when raising numbers to a given power.

Volume calculation:
12 x 18 x 36 = 7,776

T	*Machine cleared*
12 XN	*Enter the number, depress (Xn) key*
18 =	*Enter the number, depress (=) key*
216 T	*Automatic Total*
36 =	*Enter the number, depress (=) key*
7776 T	*Automatic Total*

Involution: Raise 12 to the
3rd power =

T	*Machine cleared*
12 XN	*Enter the number, depress (Xn) and (R) keys*
12 =	*Depress (=) key*
144 T	*Automatic Total*
12 =	*Enter the number, depress (=) key*
1728 T	*Automatic Total*

Involution with increase of capacity of the machine: the percentage control lever allows — as already mentioned — the operator to increase in practice the capacity of the machine; this takes place by cancelling two or four decimals of the multiplicand

Example:
99.99 raised to the 4th power

T	*Machine cleared*
99.99 XN	*Enter the number, depress (Xn) and (R) keys*
99.99 =	*Depress (=) key*
9.998.0001 T	*Automatic Total*
99.99 %	*Enter the number, shift (%) lever to the right, (=) key*
999.700.02 T	*Automatic Total*
99.99 %	*Enter the number, shift (%) lever to the left, (=) key*
99.960.003.00 T	*Automatic Total*

It is to be noted that, when multiplying a number by itself, the operation may be performed as follows:

- Enter the number,
- Depress at the same time both « Xn » and « R » keys,
- Depress « = » key.

percentages

The percentage lever gives automatic calculation of percentage, and automatically lines up the answer with the correct number of decimal places.

Percentage calculation:
12 % of 125.00

T	*Machine cleared*
125.00 XN	*Enter the number, depress (Xn) key*
12 %	*Enter the number, shift (%) lever to the left, depress (=) key*
15.00 T	*Automatic Total*

The calculation may also be performed in a combined operation, i.e. when the number on which the percentage has to be calculated represents the result of a previous calculation.

Example: 15 % of the product of 28.00 x 124 =

T	*Machine cleared*
28.00 XN	*Enter the number, depress (Xn) key*
124 =	*Enter the number, depress (=) key*
3.472.00 T	*Automatic Total*
15 %	*Enter the number, shift (%) lever to the left, depress (=) key*
520.80 T	*Automatic Total*

Calculation of an amount increased by a given percentage:

Increase by 15 % the product of 28.00 x 124 =

T	*Machine cleared*
28.00 XN	*Enter the number, depress (Xn) key*
124 =	*Enter the number, depress (=) key*
3.472.00 T	*Automatic Total*
3.472.00 RM	*Depress (RM) key*
15 %	*Enter the number, shift (%) lever to the left, depress (=) key*
3.992.80 T	*Automatic Total*

Calculation of an amount discounted by a given percentage:

Deduct 15 % from the product of 28.00 x 124 =

T	*Machine cleared*
28.00 XN	*Enter the number, depress (Xn) key*
124 =	*Enter the number, depress (=) key*
3.472.00 T	*Automatic Total*
3.472.00 RM	*Depress (RM) key*
15 %	*Enter the number, shift (%) lever to the left, depress (=) red key*
2.951.20 T	*Automatic Total*

In order to get exact figures when calculating percentages, it is advisable to operate with two ciphers in the number on which the percentage has to be calculated, when such percentage is referred to whole numbers, and with four ciphers in case of percentages referred to numbers with decimals.

mixed calculations

The **LAGOMARSINO DIVISION** is particularly useful when problems with mixed calculations have to be solved.

Example:

$$\frac{257 \times 531}{102} + 525 - (150+31+25) = 1656$$

	T	*Machine cleared*
257	XN	*Enter the number, depress (Xn) key*
531	=	*Enter the number, (=) key*
136.467	T	*Automatic Total*
136.467	RM	*(RM) key*
102	=	*Enter the number, depress (÷) key*
1.337	Q	*Automatic Total*
93	T	*Remainder*
1.337	RM	*(RM) key*
525	+	*Enter the number, (+) key*
1.862	T	*Automatic Total*
150	—	*Enter the number, (—) key*
31	—	*Enter the number, (—) key*
25	—	*Enter the number, (—) key*
206	S	*Sub-total key*
1.862	RM	*(RM) key*
1.656	T	*Total key*

percentages on cost and selling prices

With the **LAGOMARSINO DIVISION** calculator all calculations concerning the percentages on costs and selling prices can be performed very easily.

Operation:

Knowing the cost and selling price, divide the difference between them by whichever one of them you require the percentage to be expressed in relation to.

$$\frac{\text{selling price} - \text{cost}}{\text{cost}} =$$

= percentage on the cost

$$\frac{\text{selling price} - \text{cost}}{\text{selling price}} =$$

= percentage on the selling price

1st example:

Goods are bought at L. 12,400 and sold at L. 15,000.
What percentage of the selling price represents the profit?

T	*Machine cleared*
15.000.00 +	*Enter the number, (+) key*
12.400.00 −	*Enter the number, (—) key*
2.600.00 T	*Total key*
100 =	*Enter the number, (=) key*
260.000.00 T	*Automatic Total*
260.000.00 RM	*(RM) key*
15.000 =	*Enter the number, (÷) key*
17.33 Q	*Automatic Total*
50.00 T	*Remainder*

2nd example:

Goods cost L. 6,000 and are sold at L. 9,500.

What percentage of the cost price represents the profit?

T	*Machine cleared*
9.500.00 +	*Enter the number, (+) key*
6.000.00 −	*Enter the number, (—) key*
3.500.00 T	*Total key*
100 =	*Enter the number, (=) key*
350.000.00 T	*Automatic Total*
350.000.00 RM	*(RM) key*
6.000 =	*Enter the number, (÷) key*
58.33 Q	*Automatic Total*
20.00 T	*Remainder*

3rd example:

At what price should goods costing L. 3.300 be sold, to get a 25 % profit on the selling price?

T	*Machine cleared*
3.300 XN	*Enter the number, (Xn) key*
100 =	*Enter the number, (=) key*
330.000 T	*Automatic Total*
330.000 RM	*(RM) key*
75 =	*Enter the number, (÷) key*
4.400 Q	*Automatic Total*

calculation of bank interests

In the banking field, the **Lagomarsino Division** has many applications. For example, in the calculation of interests, use the following procedure:

Multiply the days by the corresponding capitals, find the total, recall it by means of the RM key and divide it by the coefficient corresponding to the required interest, as per the table printed on the next page.

$$I = \frac{\text{days x capital}}{\text{coefficient}}$$

T	*Machine cleared*
	Shift (24) lever upwards
14 XN	*Enter the number, (Xn) key*
305.600 =	*Enter the number, (=) key*
9 XN	*Enter the number, (Xn) key*
505.510 =	*Enter the number, (=) key*
13 XN	*Enter the number, (Xn) key*
805.510 =	*Enter the number, (=) key*
8 XN	*Enter the number, (Xn) key*
790.010 =	*Enter the number, (=) key*
3 XN	*Enter the number, (Xn) key*
740.010 =	*Enter the number, (=) key*
14 XN	*Enter the number, (Xn) key*
570.010 =	*Enter the number, (=) key*
35.819.870 T	*Total key*
35.819.870 RM	*(RM) key*
7.200 =	*Enter the number, (÷) key*
4.974 Q	*Automatic total*
7.070 T	*Remainder*

table for the calculation of interest by means of the division coefficient

year of 360 days

%	Divisor	%	Divisor	%	Divisor	%	Divisor
⅛	288000	3 ½	10285,71	7	5142,86	10 ½	3428,57
¼	144000	3 ⅔	9818,18	7 ¼	4965,52	10 ⅔	3375
⅓	108000	3 ¾	9600	7 ⅓	4909,09	10 ¾	3348,84
½	72000	4	9000	7 ½	4800	11	3272,73
⅔	54000	4 ¼	8470,59	7 ⅔	4695,65	11 ¼	3200
¾	48000	4 ⅓	8307,69	7 ¾	4645,16	11 ⅓	3176,47
1	36000	4 ½	8000	8	4500	11 ½	3130,43
1 ¼	28800	4 ⅔	7714,29	8 ¼	4363,64	11 ⅔	3085,71
1 ⅓	27000	4 ¾	7578,95	8 ⅓	4320	11 ¾	3063,83
1 ½	24000	5	7200	8 ½	4235,29	12	3000
1 ⅔	21600	5 ¼	6857,14	8 ⅔	4153,85	12 ¼	2938,78
1 ¾	20571,43	5 ⅓	6750	8 ¾	4114,29	12 ⅓	2918,92
2	18000	5 ½	6545,45	9	4000	12 ½	2880
2 ¼	16000	5 ⅔	6352,94	9 ¼	3891,89	12 ⅔	2842,11
2 ⅓	15428,57	5 ¾	6260,87	9 ⅓	3857,14	12 ¾	2823,53
2 ½	14400	6	6000	9 ½	3789,47	13	2769,23
2 ⅔	13500	6 ¼	5760	9 ⅔	3724,14	13 ½	2666,67
2 ¾	13090,91	6 ⅓	5684,21	9 ¾	3692,31	14	2571,43
3	12000	6 ½	5538,46	10	3600	14 ½	2482,76
3 ¼	11076,92	6 ⅔	5400	10 ¼	3512,20	15	2400
3 ⅓	10800	6 ¾	5333,33	10 ⅓	3483,87	15 ½	2322,58

Formula: interest = capital x days : interest coefficient

square roots

Use the method illustrated below, and the corresponding table.

$$\sqrt{20.735} = 143.996$$

— enter on keyboard the number of which the square root is required, adding zeros until it has at least 6 decimals, and depress the (+) key.

— find, on the A column of the table, the number nearest to the 3 first figures of the given number,

— enter this number on keyboard adding zeros until second figure has as many digits as the first figure. Add the two figures together.

	T	*Machine cleared*
20.735.000.000	+	*Enter the number, (+) key*
20.800.000.000	+	*Enter the number, (+) key*
41.535.000.000	T	*Total key*
41.535.000.000	RM	*(RM) key*
288.444	=	*Enter the number, (÷) key*
143.996	Q	*Automatic Total*
217.776	T	*Remainder*

— divide the total of the two numbers by the coefficient given on the table which corresponds to it, using column 1 if the value of which the square root is required has an odd number of whole figures, and column 2 if the worth given has an even number of whole figures, or decimal figures only.

— after the division, the quotient will be the required result, approximated to the 5 first figures, and it will have as many whole numbers as — in the given number — the groups of two figures on the left of the decimal point.

$$\sqrt{625} = 25$$

T	*Machine cleared*
625.000.000 +	*Enter the number, (+) key*
627.000.000 +	*Enter the number, (+) key*
1.252.000.000 T	*Total key*
1.252.000.000 RM	*(RM) key*
50.080 =	*Enter the number, (÷) key*
25.000 Q	*Automatic Total*

$$\sqrt{16,7145} = 4,088$$

T	*Machine cleared*
16.714.500.0 +	*Enter the number, (+) key*
16.600.000.0 +	*Enter the number, (+) key*
33.314.500.0 T	*Total key*
33.314.500.0 RM	*(RM) key*
8.148.6 =	*Enter the number, (÷) key*
4.088 Q	*Automatic Total*
30.232 T	*Remainder*

table for the extraction of the square root with division coefficient

A	Col. 1	Col. 2	A	Col. 1	Col. 2	A	Col. 1	Col. 2	A	Col. 1	Col. 2	A	Col. 1	Col. 2
100	200 000	632 455	175	264 575	836 660	295	343 511	108 627	477	436 806	138 130	746	546 260	172 742
102	201 990	638 748	178	266 833	843 800	299	345 832	109 361	483	439 545	138 996	755	549 545	173 781
104	203 960	644 980	181	269 072	850 881	303	348 137	110 090	489	442 266	139 857	764	552 811	174 814
106	205 912	651 152	184	271 293	857 904	307	350 428	110 815	495	444 971	140 712	773	556 057	175 840
108	207 846	657 267	187	273 495	864 869	311	352 703	111 534	502	448 107	141 703	782	559 285	176 861
110	209 761	663 325	190	275 681	871 779	315	354 964	112 249	509	451 220	142 688	791	562 494	177 876
112	211 660	669 328	193	277 848	878 635	319	357 211	112 960	516	454 312	143 666	801	566 038	178 997
114	213 541	675 277	196	280 000	885 437	324	360 000	113 842	523	457 383	144 637	811	569 561	180 111
116	215 406	681 175	199	282 134	892 188	329	362 767	114 717	530	460 434	145 602	821	573 062	181 218
118	217 255	687 022	202	284 253	898 888	334	365 513	115 585	537	463 465	146 560	831	576 541	182 318
120	219 089	692 820	205	286 356	905 538	339	368 239	116 447	544	466 476	147 512	841	580 000	183 412
122	220 907	698 570	208	288 444	912 140	344	370 944	117 303	551	469 467	148 458	851	583 438	184 499
124	222 710	704 272	211	290 516	918 694	349	373 630	118 152	558	472 440	149 398	861	586 856	185 580
126	224 499	709 929	214	292 574	925 202	354	376 297	118 995	565	475 394	150 333	871	590 254	186 654
128	226 274	715 541	217	294 618	931 665	359	378 945	119 833	572	478 330	151 261	881	593 632	187 723
130	228 035	721 110	220	296 647	938 083	364	381 575	120 664	579	481 248	152 184	891	596 992	188 785
132	229 782	726 636	223	298 663	944 457	369	384 187	121 490	587	484 561	153 231	901	600 333	189 842
134	231 516	732 120	226	300 665	905 789	374	386 781	122 311	595	487 852	154 272	912	603 986	190 997
136	233 238	737 563	229	302 654	957 078	379	389 358	123 126	603	491 121	155 306	923	607 618	192 145
138	234 946	742 967	232	304 630	963 327	384	391 918	123 935	611	494 368	156 333	934	611 228	193 287
140	236 432	748 331	235	306 594	969 536	389	394 461	124 739	619	497 594	157 353	945	614 817	194 422
142	238 327	753 657	239	309 192	977 752	394	396 988	125 538	627	500 799	158 366	956	618 385	195 550
144	240 000	758 946	243	311 769	985 900	399	399 499	126 332	635	503 984	159 373	967	621 932	196 672
146	241 660	764 198	247	314 324	993 981	405	402 492	127 279	643	507 148	160 374	978	625 459	197 787
148	243 310	769 415	251	316 859	100 199	411	405 462	128 218	651	510 294	161 369	989	628 967	198 987
150	244 949	774 596	255	319 374	100 995	417	408 411	129 151	659	513 419	162 357	999	632 139	199 900
152	246 676	779 743	259	321 869	101 784	423	411 339	130 076	667	516 526	163 340			
154	248 193	784 856	263	324 345	102 567	429	414 246	130 996	675	519 615	164 316			
156	249 799	789 936	267	326 802	103 344	435	417 133	131 909	683	522 685	165 287			
158	251 396	794 984	271	329 241	104 115	441	420 000	132 815	692	526 117	166 373			
160	253 982	800 000	275	331 662	104 880	447	422 847	133 716	701	529 528	167 451			
163	255 342	807 465	279	334 065	105 640	453	425 675	134 610	710	532 916	168 523			
166	257 682	814 862	283	336 452	106 395	459	428 485	135 499	719	536 283	169 587			
169	260 000	822 192	287	338 821	107 144	465	431 277	136 381	728	539 629	170 645			
172	262 297	829 457	291	341 174	107 888	471	434 050	137 258	737	542 954	171 697			

conversion table

Conversion of English measures into the metric system and vice versa - Multiply the given numbers by the following values

MEASURE OF VOLUME

Cubic centimeters into cu. in.	0,061 02
Cubic meters into cu. ft.	35,310 735
Cubic meters into cu. yds.	1,307 94
Cu. in. into cubic centimeters	16,387 16
Cu. ft. into cubic meters	0,028 32
Cu. yds. into cubic meters	0,764 56

MEASURE OF LENGTH

Millimeters into inches	0,039 370
Centimeters into inches	0,393 701
Meters into feet	3,280 399
Meters into yards	1,093 614
Kilometers into yards	1093,614 500
Kilometers into miles	0,621 273
Inches into millimeters	25,399 98
Inches into centimeters	2,539 998
Feet into meters	0,304 799
Yards into meters	0,914 399
Yards into kilometers	0,000 91
Miles into kilometers	1,609 342

MEASURE OF SURFACE

Square centimeters into sq. in.	0,155 00
Square meters into sq. ft.	10,763 87
Square meters into sq. yds.	1,195 99
Square kilometers into sq. mi.	0,386 10
Hectares into acres	2,471 04

π = ratio between circumference and diameter of a circle = 3,141593654

Sq. in. into sq. centimeters	6,451 59
Sq. ft. into square meters	0,092 90
Sq. yds. into square meters	0,836 13
Sq. mi. into square kilometers	2,589 98
Acres into hectares	0,404 684

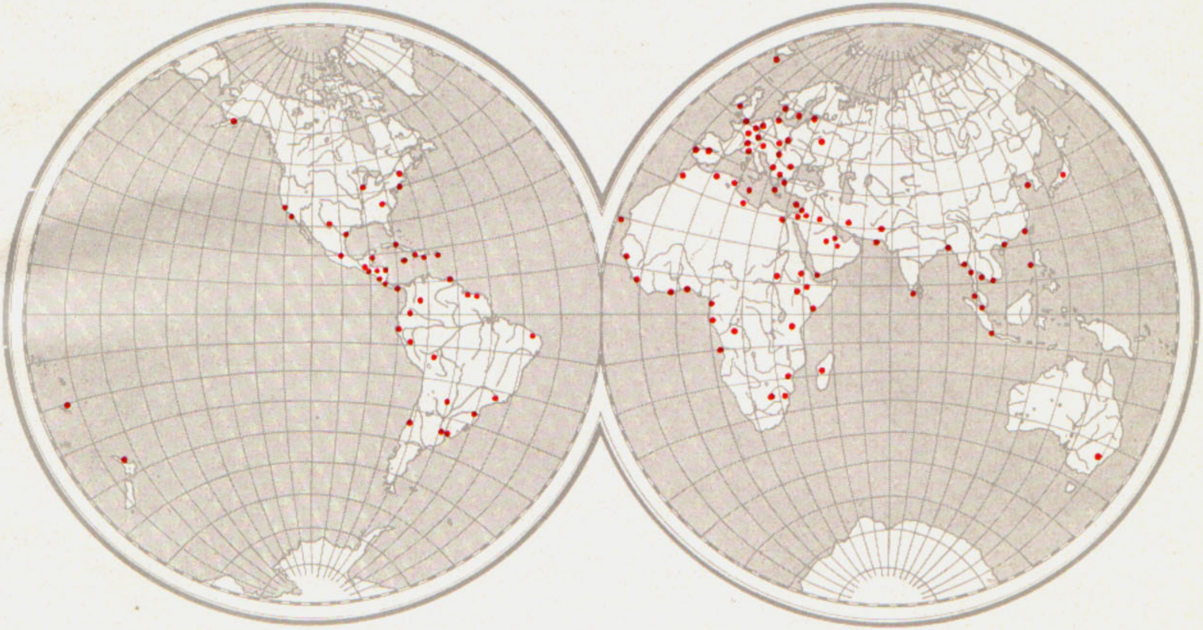
$1/\pi$ = ratio between diameter and circumference of a circle = 0,318309886

MEASURES OF CAPACITY

Litres into pints	1,760 718
Litres into US pints	2,113 628
Litres into quarts	0,880 359
Litres into US quarts	1,0567
Litres into gals.	0,220 089
Litres into US gals.	0,2642
Hectolitres into gals.	2,007 043
Pints into litres	0,567 95
US pints into litres	0,473,12
Quarts into litres	1,135 90
US quarts into litres	0,9463
Gals. into litres	4,543 60
US gals. into litres	3,7850
Gals. into hectolitres	0,045 44

WEIGHTS

Grams into grains	15,432 337
Grams into ozs.	0,035 274
Grams into lbs.	0,002 205
Kilograms into lbs.	2,204 624
Kilograms into cwts.	0,019 684
Kilograms into long tons	0,000 984
Kilograms into short tons	0,000 984
Grains into grams	0,064 799
Ozs. into grams	28,349 530
lbs. into grams	453,592 430
Lbs. into kilograms	0,453 592
Cwts. into kilograms	50,802 350
Long tons into kilograms	1016,047 00
Short tons into kilograms	907,184 00



THE LAGOMARSINO ORGANIZATION IN THE WORLD

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